

Figure 1

Map of Human IL-17 Like cDNA (SEQ ID NO:1) and
Amino Acid (SEQ ID NO:2) Sequences

CTCAAGTCACTCCCTAAAAAGACAGTGGAATAAATTTGAATAAACAAACAGGCTTGCT	1
GAAAATAAATCAGGACTCTAACCTGTCTCCAGTCAGCCTGTCTTCCACGAGGCCGTGCAG	61
TCAGTCCCCCACTTGTGACTGAGTGTGCAGTGCCCGCAGCATGTACCAGGTGGTTGCATTCT	121
M Y Q V A F L	8
TGGCAATGGTCAATGGGAACCCACACCTACAGCCACTGGCCCCAGCTGTGCCCCAGCAAAG	181
A M V M G T H T Y S H W P S C C P S K G	9
GGCAGGACACCTCTGAGGAGCTGCTGAGGTGGAGCACTGTGCCTGTGCCTCCCCTAGAGC	241
Q D T S E E L L R W S T V P P P L E P	29
CTGCTAGGCCCAACCGCCACCCAGAGTCCTGTAGGGCCAGTGAAGATGGACCCCTCAACA	301
A R P N R H P E S C R A S E D G P L N S	49
GCAGGGCCATCTCCCCCTGGAGATATGAGTTGGACAGAGACTTGAACCGGCTCCCCCAGG	361
R A I S P W R Y E L D R D L N R L P Q D	69
ACCTGTACCACGCCCGTTGCCCTGTGCCCGCACTGCGTCAAGCTACAGACAGGCTCCCACA	421
L Y H A R C L C P H C V S L Q T G S H M	89
TGGACCCCCGGGCAACTCGGAGCTGCTCTACCCACAACCAGACTGTCTTCTACCGGCGGC	481
D P R G N S E L L Y H N Q T V F Y R R P	109
CATGCCATGGCGAGAAGGGCACCCACAAGGGCTACTGCCCTGGAGCGCAGGCTGTACCGTG	541
C H G E K G T H K G Y C L E R R L Y R V	129
TTTCCTTAGCTGTGTGTGTGCGGCCCCCGTGTGATGGGCTAG 643	601
S L A C V C V R P R V M G * 162	149

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Figure 2A

(Map of Mouse IL-17 Like cDNA (SEQ ID NO:3) and Amino Acid
(SEQ ID NO:4) Sequences with Predicted Signal Peptide

1 ATGTACCAGGCTGTTGCATTTCTTGGCAATGATCGTGGGAACCCACACCGTCAGCTTG
M Y Q A V A F L A M I V G T H T V S L 19
58 CGGATCCAGAGGGCTGCAGTCACCTTGCCCAAGCTGCTGCCCAAGCAAGAGCAAGAACCC
R I Q E G C S H L P S C C P S K E Q E P 39
118 CCGAGAGTGGCTGAAGTGGAGCTCTGCATCTGTGTCTCCCAAGAGCCTCTGAGCCAC
P E E W L K W S S A S V S P P E P L S H 59
178 ACCACACGCAATCCTGCAGGGCCAGCAAGGATGGCCCCCTCAACAGCAGGGCCATC
T H H A E S C R A S K D G P L N S R A I 79
238 TCTCCTTGGAGCTATGAGTTGGACAGGGACTTGAATCGGGTCCCCCAGGACCTGTACCAC
S P W S Y E L D R D L N R V P Q D L Y H 99
298 GCTCGATGCCCTGTGCCACACTGCGTCAGCCTACAGACAGGCTCCACATGGACCCGCTG
A R C L C P H C V S L Q T G S H M D P L 119
358 GGCAACTCCGTCCTTACCACAACCAAGACGGTCTTCTACCGGGCCATGCCATGGC
G N S V P L Y H N Q T V F Y R R P C H G 139
418 GAGGAAGTACCCATCGCCGCTACTGCTTGGAGCGCAGGCTCTACCGAGTCTCCTTGGCT
E E G T H R R Y C L E R R L Y R V S L A 159
478 TGTGTGTGTGCGGCCCCGGTCTATGGCTTAGTCATGCTCACCACCTGCCTGAGGCTGA
C V C V R P R V M A * 170
538 TGCCCGGTTGGAGAGAGGGCCAGGTGTACAAATCACCTTGCCCAATGCGGGCCGGTTCAA
598 GCCCTCCAAGCCCTACCTGAAGCAGCAGGCTCCCGGACAAAGATGGAGACTTGGGGAG
658 AAACCTGACTTTTGCACACTTTTGGGAAGCACTTTTGGGAAGGAGCAGGTTCCCGCTTGTC

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Figure 2B

718 TGCTAGAGGATGCTGTTGTGGCAATTTCTACTCAGGAACGGACTCCAAAGGCCCTGTGACC
778 CTGGAAGCCATACTCCTGGCTCCTTTCCCTGAATCCCCAACTCCTGGCACAGGCACATT
838 TCTCCACCTCTCCCCCTTTGGCCTTTTGTGTGTTTGTGTCATGCCAACTCTGCGTGC
898 AGCCAGGTGTAATTGCCCTTGAAGGATGGTTCTGAGGTGAAAGCTGTTATCGAAAGTGAAG
958 AGATTATCCAAATAAACATCTGTGTTTAAAAAATAAAAAAATAAAAAA 1496

Map of Non-Secreted Form of Mouse IL-17 Like cDNA (SEQ ID NO:9), and
Corresponding Amino Acid Sequence (SEQ ID NO:10)

1 CCGGCAGGTGCCCTCGGCGGTCCTCCAAAGCTTAGGGAAGCTCCAGGTGCTTGGGAAAT
61 GAAGAAAAGGCCACCGAGCAAAAAGGAACAGAGAGGGGAGGAGCAGTGCTGTGGGCTC
121 GCCTAGGTCGAGGGCCATTATCACCTACAAATCAGAAATGTGGAGTGCTATCTAGAGG
181 TCTCCATCTTTGCCATTGCTGGGTCGCTCAGAAAAGTGATGGGGTTGTCCCATTTGCCA
241 AGAACAGCTTCTGCTTACCAGCAGGTGCTGACCTCTTTCCCCAGAGGCACAGGGAAGGAA
301 TTCCAGCCCCGGTTGGCTGCCAGAGGCTTCTCTGGCGTTGGGTACAGAGGCAGAGAAAG
361 AAACCCCAAATGTCTCCATGAAAACAAATGTCCCGTCAATCCAGGCCAGATCATCTGTC
421 AGTGTCACACAGTTGAGACAAGAGCTGGGGTCAATTTCTGTGCCCTAAGAGTGCCCTGTTCT
481 GCAC TGGCCAAGGCTGTGTCATTCTTGGCAATGATCGTGGGAACCCACACCCGTCAGCTTG

541 CGGATCCAGAGGGCTGCAGTCACTTGCCCCAGCTGCTGCCCCAGCAAGAGCAAGAACCC
11 R I Q E G C S H L P S C C P S K E Q E P 30
M I V G T H T V S L 10

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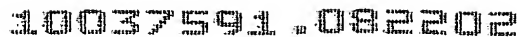


Figure 2C

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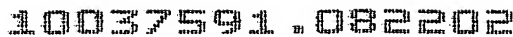


Figure 3A

(SEQ ID NO:5)

Smith-Waterman score: 155; 25.0% identity in 160 AA overlap

hIL-17L		10	20	30	40	50	60
	XNQDSXPAPVSLPRGLSVSAPLVTECAVP	SMYQVVAF	LAMVMGTH	TYSHPSCCPSKQ			
	:	:	:	:	:	:	:
hIL-17	MTPGKTSLVSLLLLLEAIVKAGITIPRNP	GCPNSEDK					
	10	20	30				
hIL-17L	70	80	90	100	110	120	
	DTSEELRWSTVPVPPLEPARPNRHPE	SCRASEDGPLNSRAISPWRYELDRDLNRLPQDL					
	:	:	:	:	:	:	:
hIL-17	NFPRTVMVNLI-----HNRNTNTNPK--RSSD----	YNNRSTSPWNLRHNEDPERYP	SVI				
	40	50	60	70	80		

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Figure 3B

	130	140	150	160	170	180
hIL-17L	YHARCLCPHCVSLQ	TGSHMDPLGNSV	PLYHNQTVFYRR	PCHEEGTHRRY	CYCLERRLYRVS	
	:: :	:: :	:	:: :	:: :	
hIL-17	WEAKCRHLGCIN--	ADGNVDYHMNSV	PIQQEILVLRRE	PPHCPNS----	FRLEKIL--VS	
	90	100	110	120	130	140

	190
hIL-17L	LACVCVRPRVMA
	:: :
hIL-17	VGCTCVTPIVHHVA
	150

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Figure 4

Pile-Up of Human IL-17 like Amino Acid Sequence, hIL-17L, (SEQ ID NO:2)
with a Known Human IL-20 Amino Acid Sequence, hIL-20 (SEQ ID NO:6)

SCORES Init1: 124 Initn: 124 Opt: 175
Smith-Waterman score: 175; 36.7% identity in 90 aa overlap

hIL-17L	70	80	90	100	110	120
	RWSTVPVPPL	EPARPNRHP	ESCRASED	GPLNSRAIS	PWRYELDR	DLNRLPQDLYHARCLC
hIL-20	70	80	90	100	110	120
	RNIEEMVAQL	RNSSELAQR	KCEVNLQL	WMSNKRSL	SPWGYSIN	HDPSRIPVDLPEARCLC

hIL-17L	130	140	150	160	170	180
	PHCVSLQTG	SHMDPLG	NSVPLYH	NQTVFYRR	PCHEEGTH	RRYCLERRLYRVSLA-CVCV
hIL-20	130	140	150	160	170	180
	LGCVNPFT	MQE-DRS	MVSVPF-SQ	VPVRRRL	CPPPRTGP--	CRQRAVME

hIL-17L 190 RPRVMA

hIL-20 F

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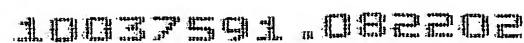


Figure 5

Family Member

hIL-17L

RWSTVPVPPLEPARPNRHPESCRASEDGPLNSRAISPWRYELDRDLNRLPQDLYHARCLC
| : : : | | | : : : | | : : | | : | | |
RNIEEMVAQLRNSSELAQKCEVNQLWMSNKRSLSWPWGYSINHDPISRIPVDLPPEARCLC

hIL-17b

PHCVSLQTGSHMDPLGNSVPLYHNQTVFYRRPCHGEETHRRYCLERRLYR-VSLACVCV
|| : | : : | ||| : : | : | | | : : : | : | :
LGCVNPFTMQE-DRSMVSVPVF-SQVPVRRRLCPPPPRTGP--CRQRAMMETIavgctci

hIL-17b

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Figure 6A

Pile-Up of Human IL-17 Like Amino Acid Sequence, hIL-17L, (SEQ ID NO:2)
with Amino Acid Sequence of a Known Human IL-17 Family Member,
hIL-17c (SEQ ID NO:8)

SCORES Init1: 149 Initn: 194 Opt: 236

Smith-Waterman score: 243; 34.5% identity in 171 aa overlap

hIL-17L	20	30	40	50	60	69
	GLSVSAPLVTECAVPSMYQVVAFLAMVMGTHTYSHW-PSCCPSK----					GQDTSELLR--
hIL-17c	10	20	30	40	50	
	MTLLPGLLFLTWLHTCLAHHDPSLRGHPHSHGTPHCYSAEELPLGQAPPHLLARGA					
hIL-17L	70	80	90	100	110	
	-WS-TVFPV-----PLEPARP-NRH--PES---C---RASE--DGPLNSRAISPWRYELDRD					
hIL-17c	60	70	80	90	100	110
	KGQALPVALVSSLEAASHRGRHERPSATTQCPVLRPVEEVLEADTHQRSISPWRYRVDTD					

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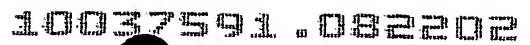


Figure 6B

RYCLERRLYRVSLACVCRPRVMA
AFAFHTEFIHVPVGCTCVLP_{RSV}

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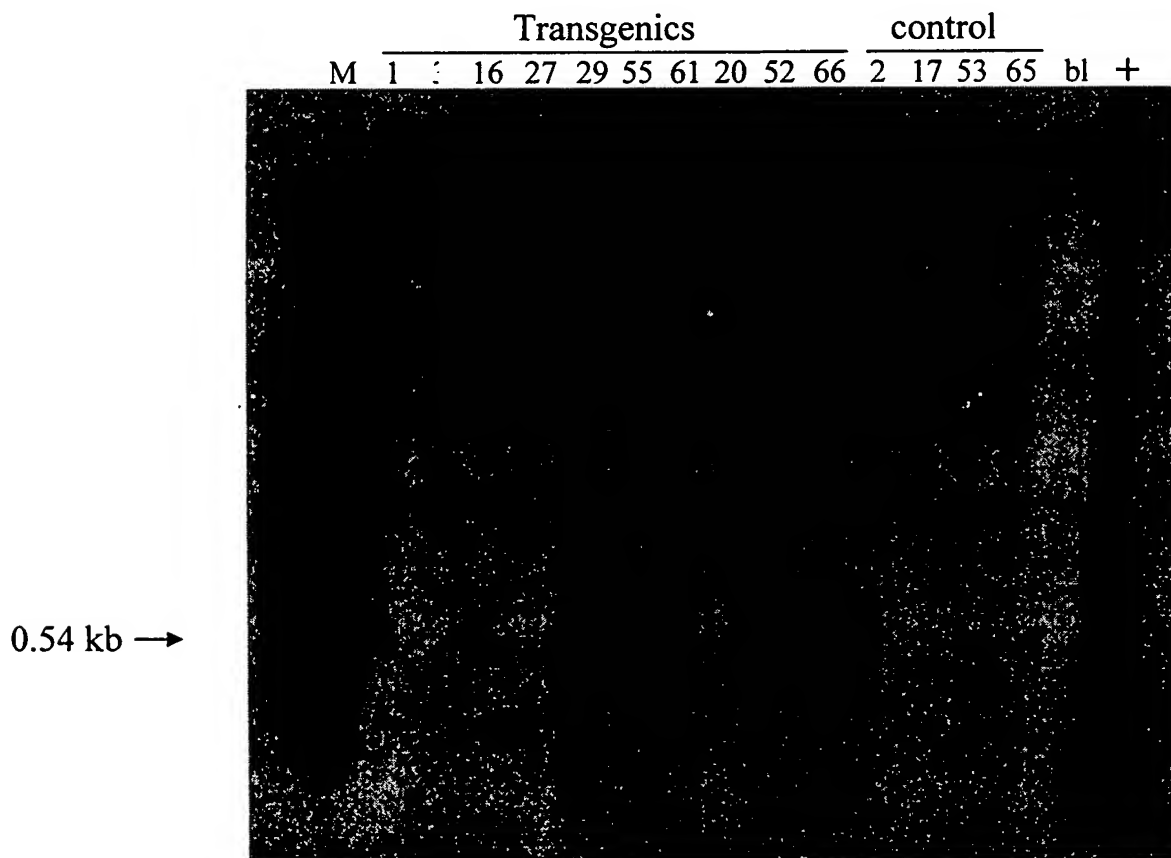
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Figure 7

Northern Blot Expression Analysis of TH00-018 Necropsied Transgenic Founders



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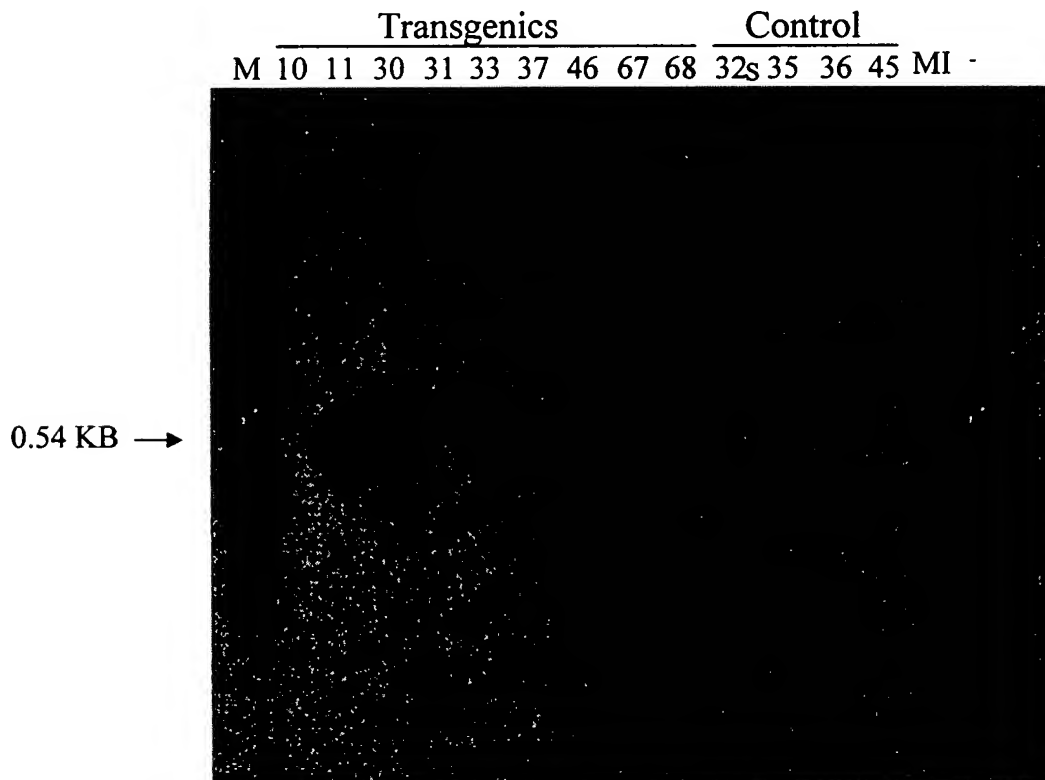
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Figure 8

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Northern Blot Expression Analysis of TH00-018
Hepatectomized Transgenic Founders



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Figure 9

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Non-Transgenics

IL-17E Transgenics

A



Lymph Node

B



C



Lymph Node B220 2x

D

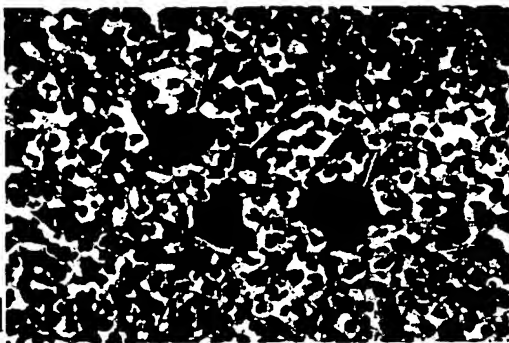
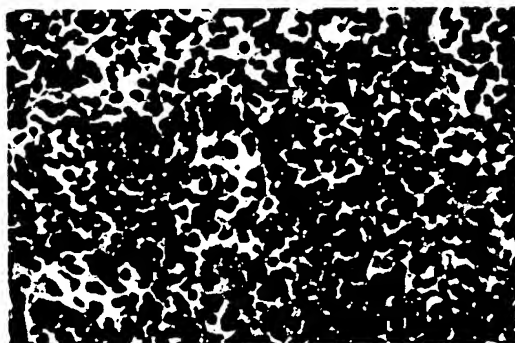
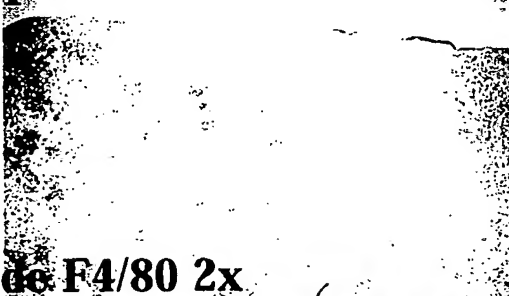


E



Lymph Node F4/80 2x

F



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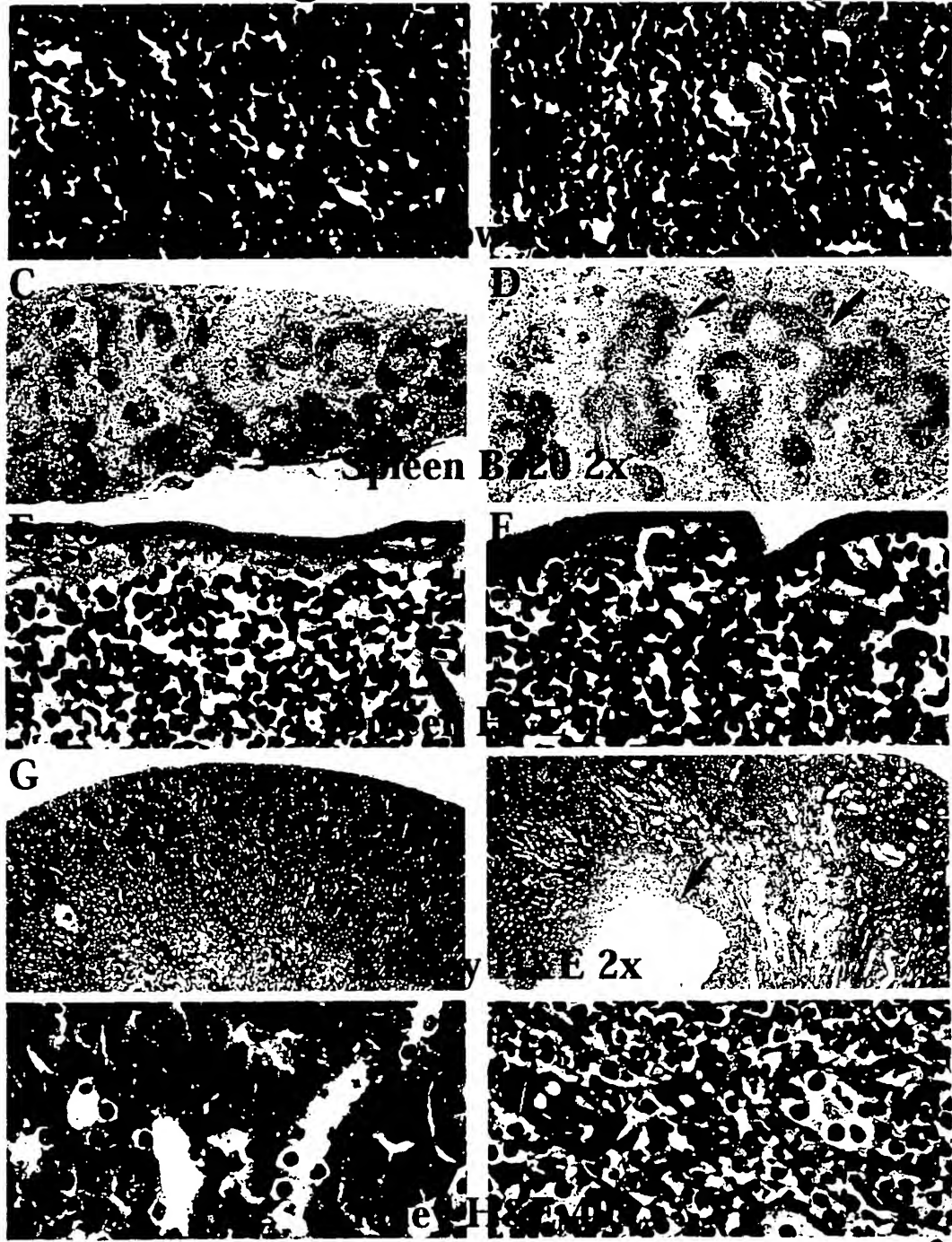
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Figure 10

Non-Transgenics

IL-17E Transgenics



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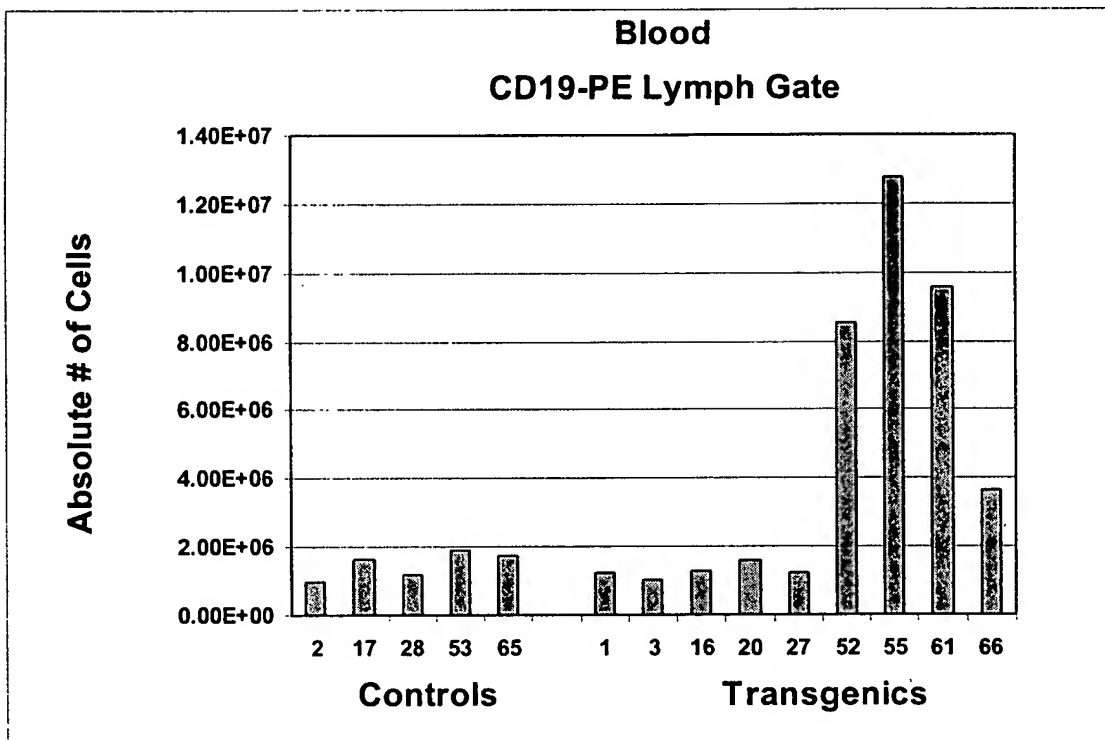


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Figure 11



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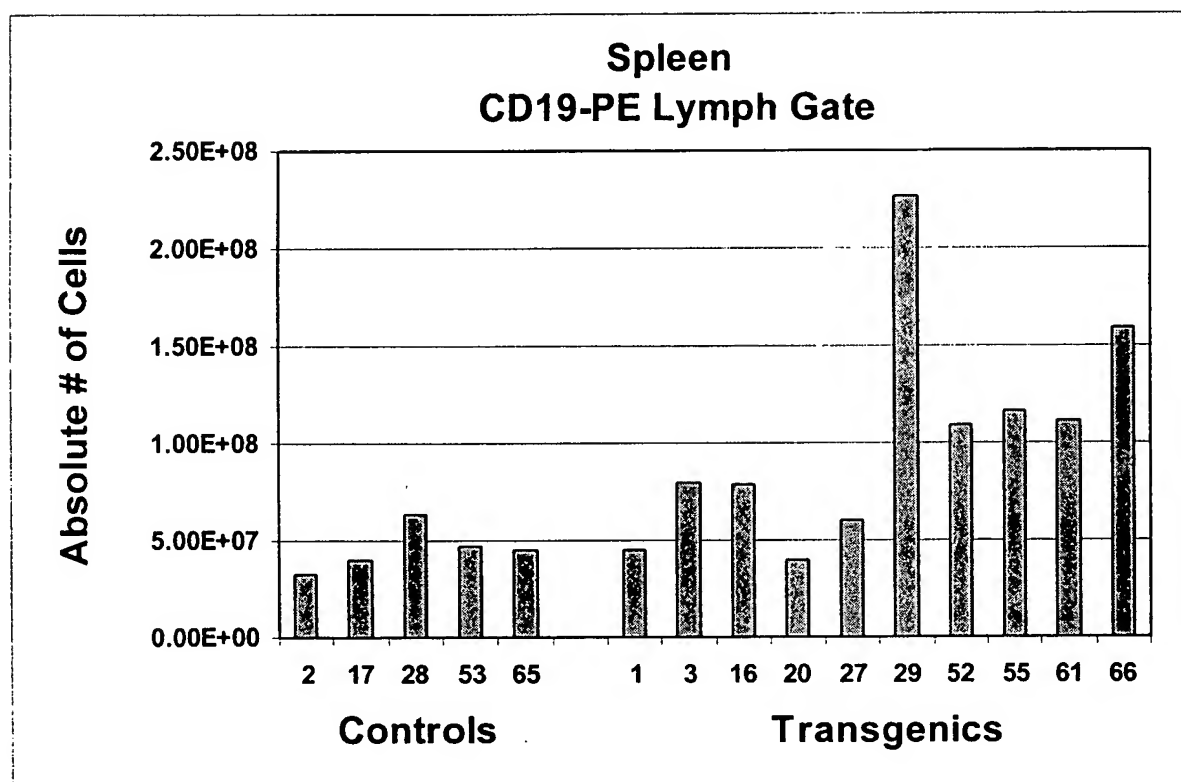
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Figure 12



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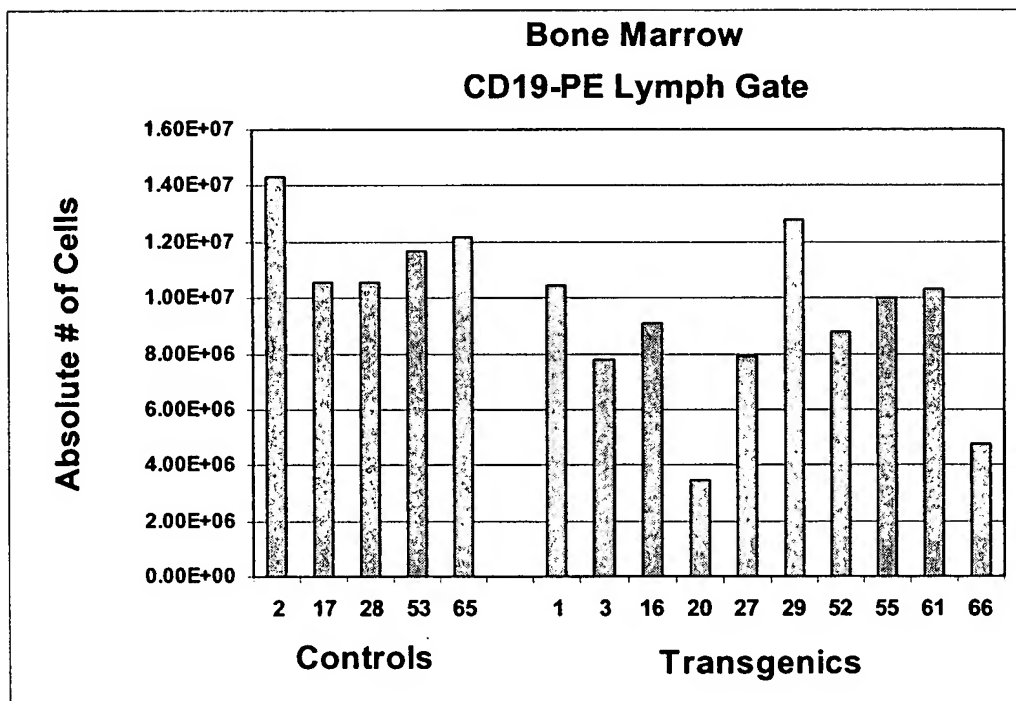
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Figure 13



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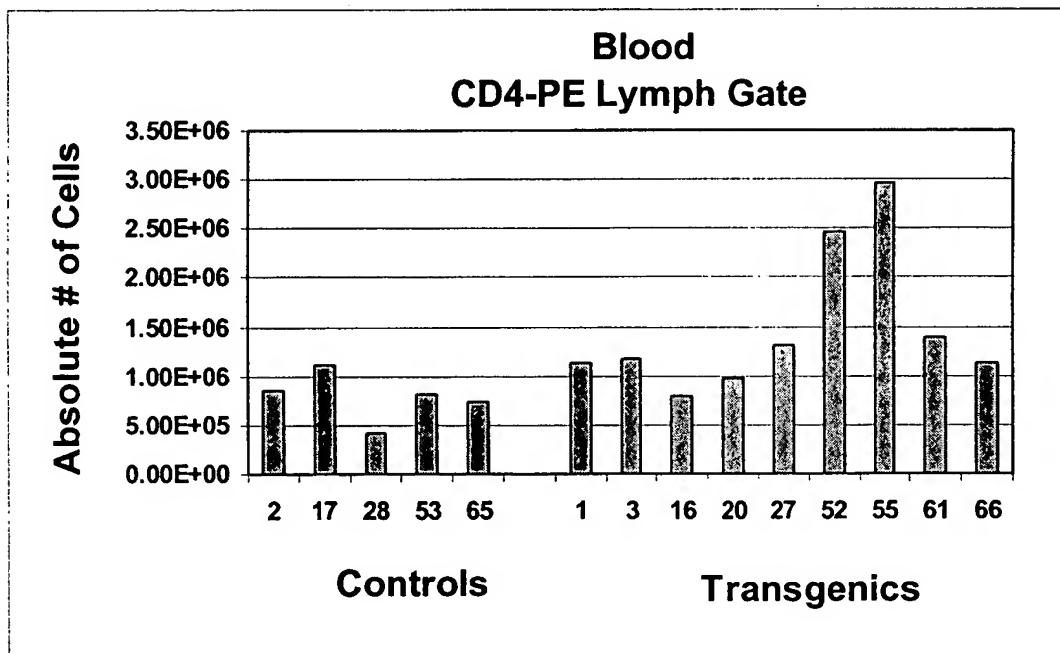
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Figure 14



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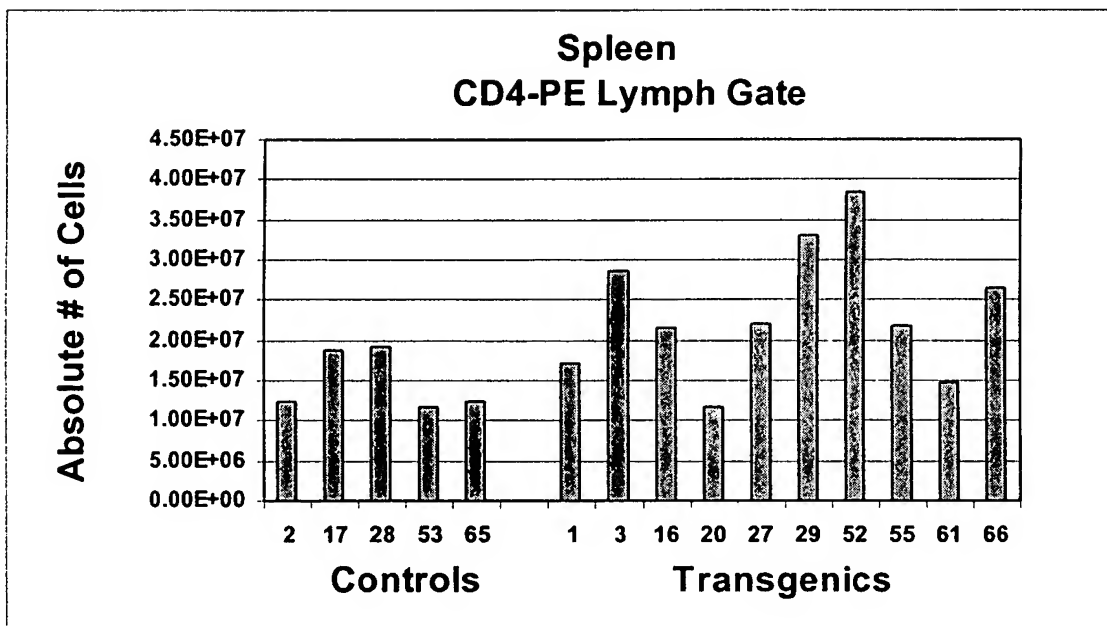
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Figure 15



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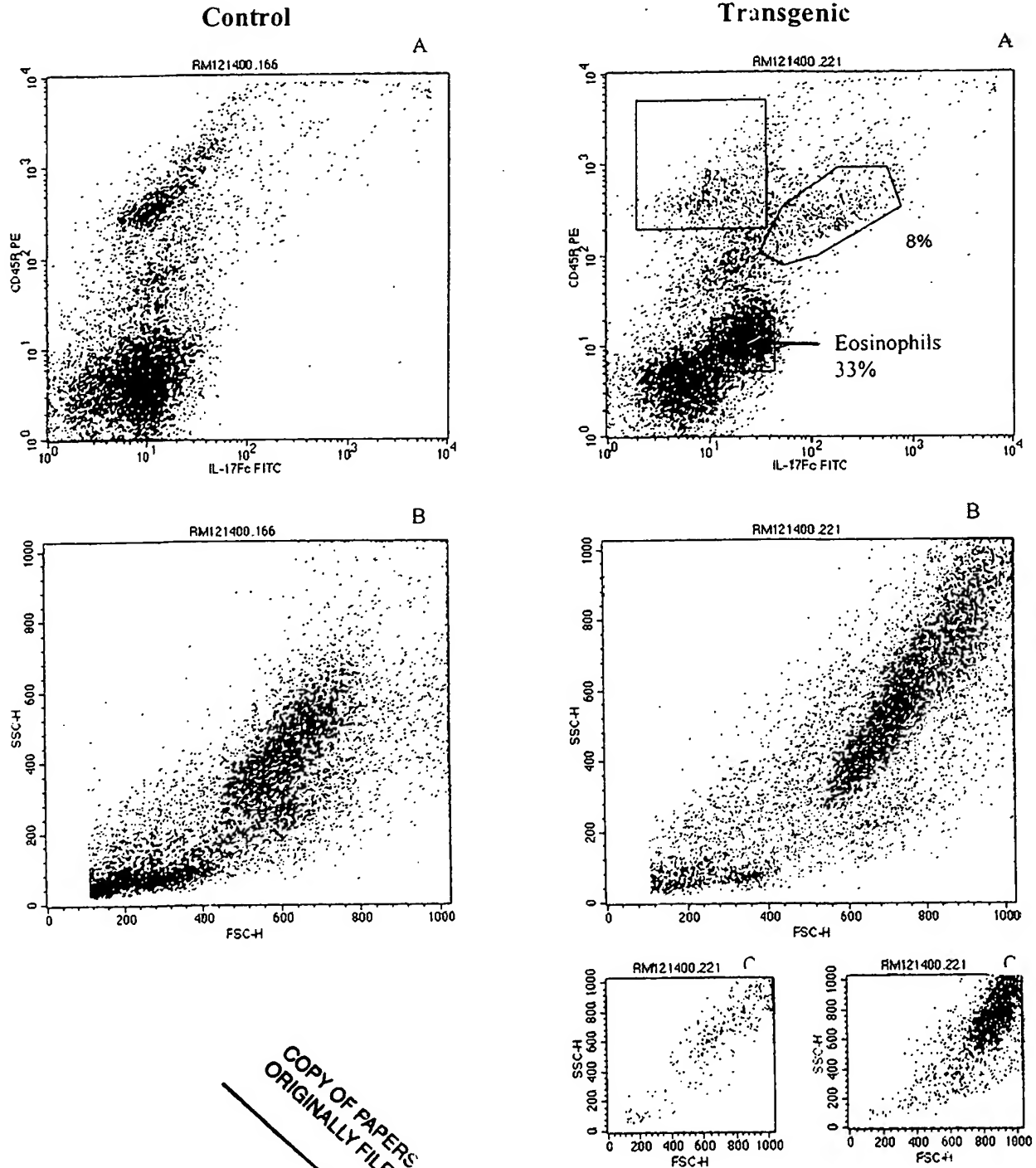
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Figure 16

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CD45R+ CELLS EXPRESSING IL17Br IN TRANSGENIC BONE MARROW



Granulocyte-like
cells

Eosinophil-like cells

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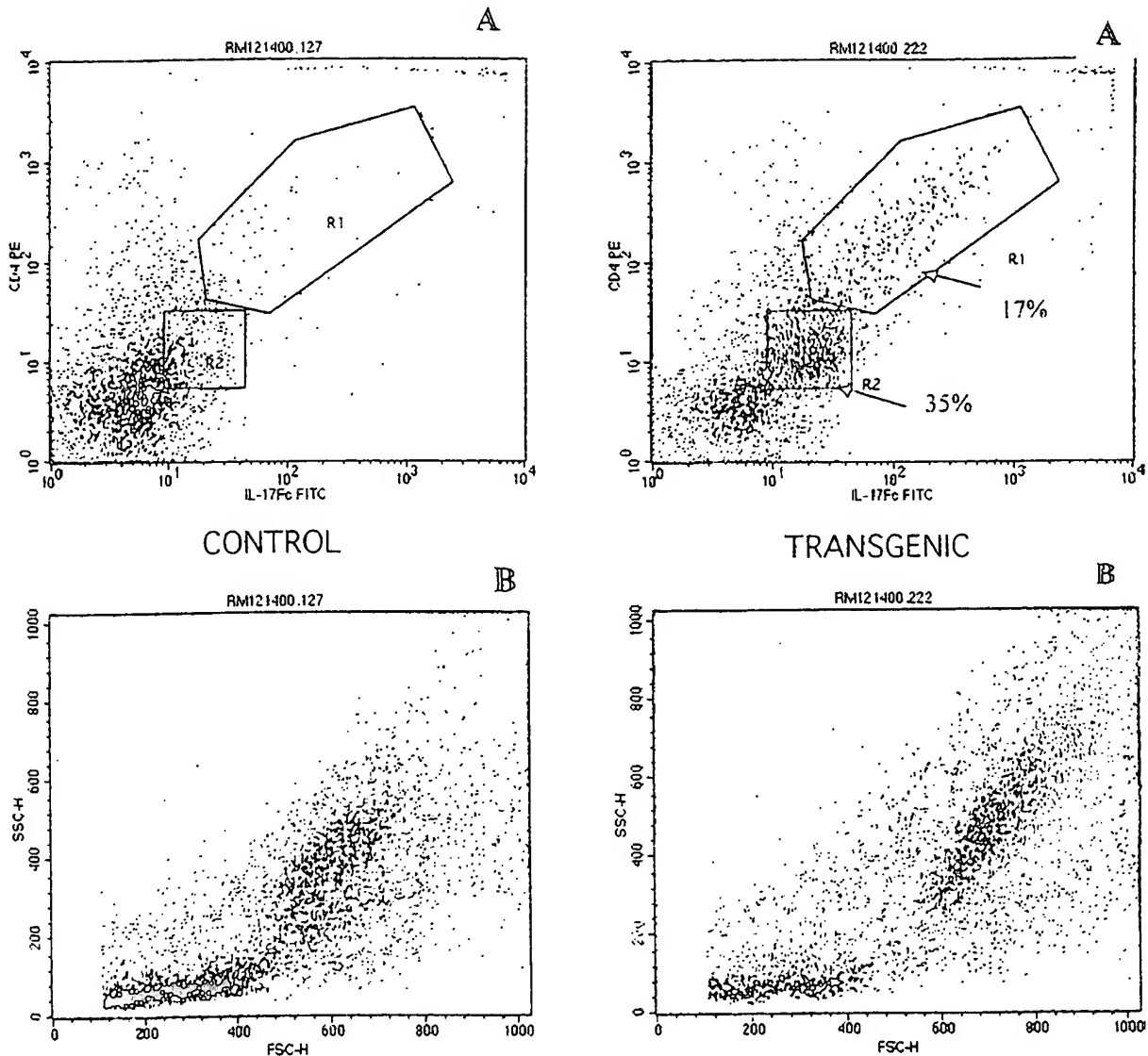
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Figure 17

CD4+ CELLS EXPRESSING
IL17Br IN TRANSGENIC BONE
MARROW



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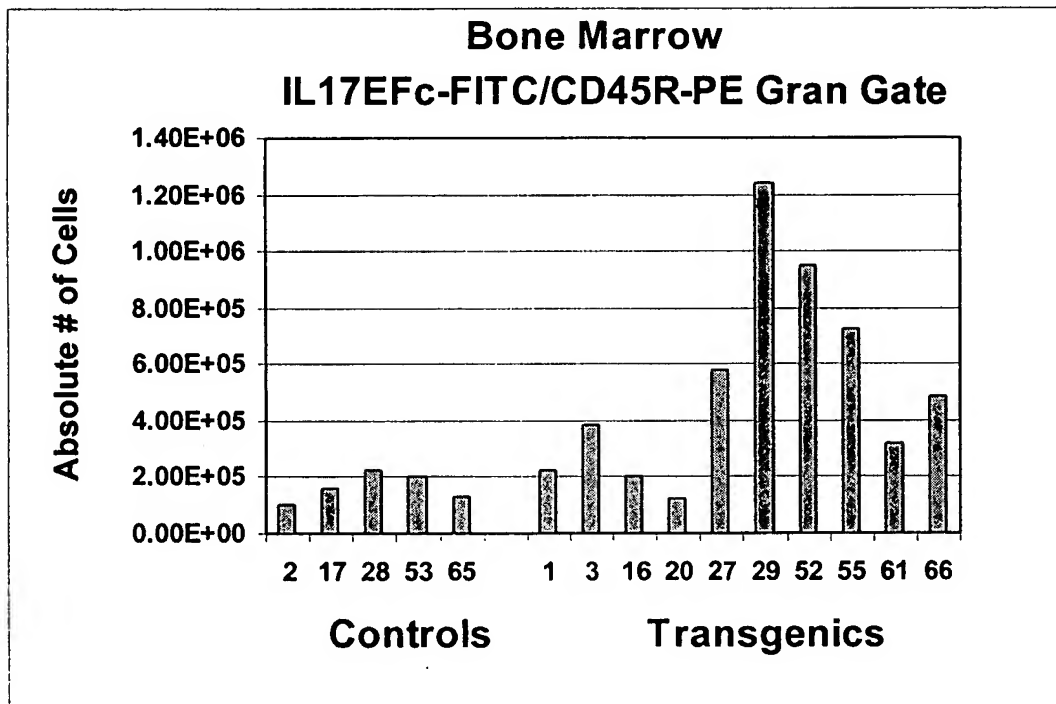
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Figure 18



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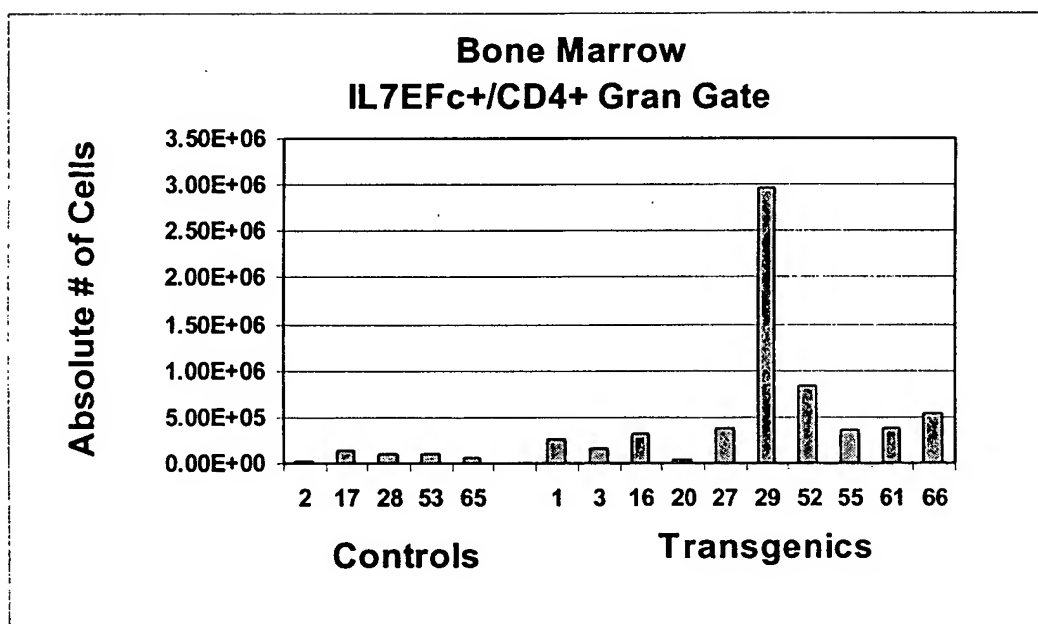
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Figure 19



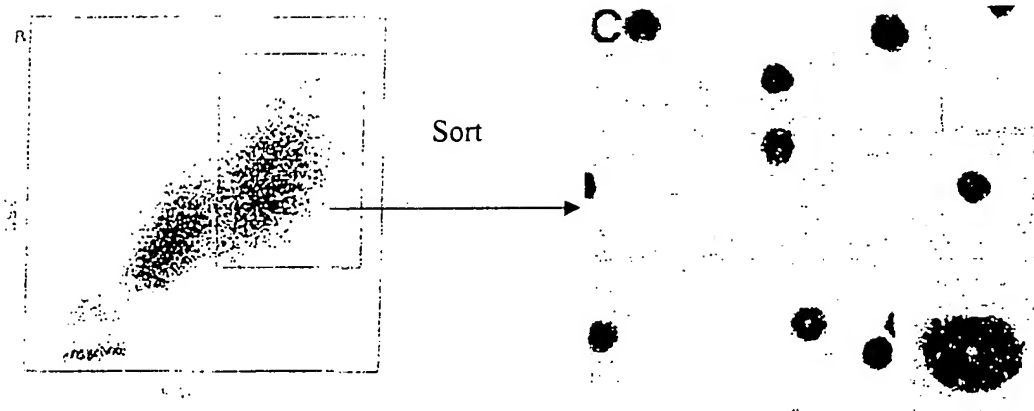
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Figure 20



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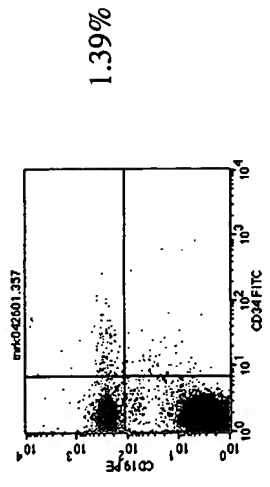
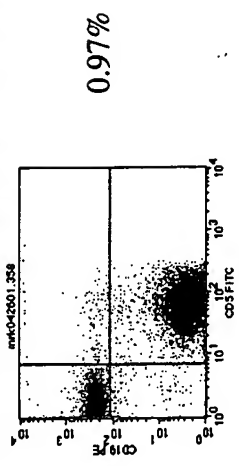
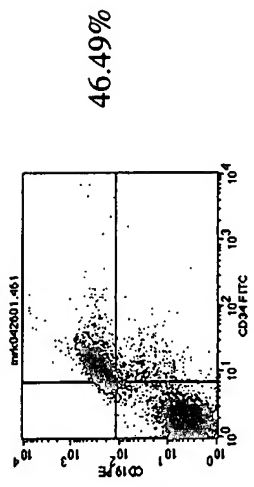
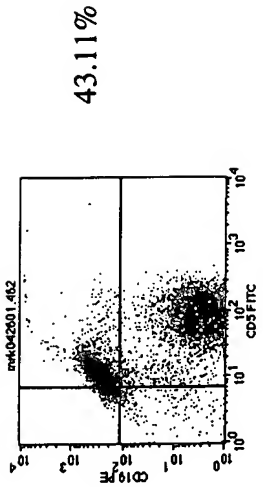
Figure 21A

Transgenic

Non-transgenic Control

CD5+ on CD19+ Lymphocytes in Lymph Node

CD34+ on CD19+ Lymphocytes in Lymph Node



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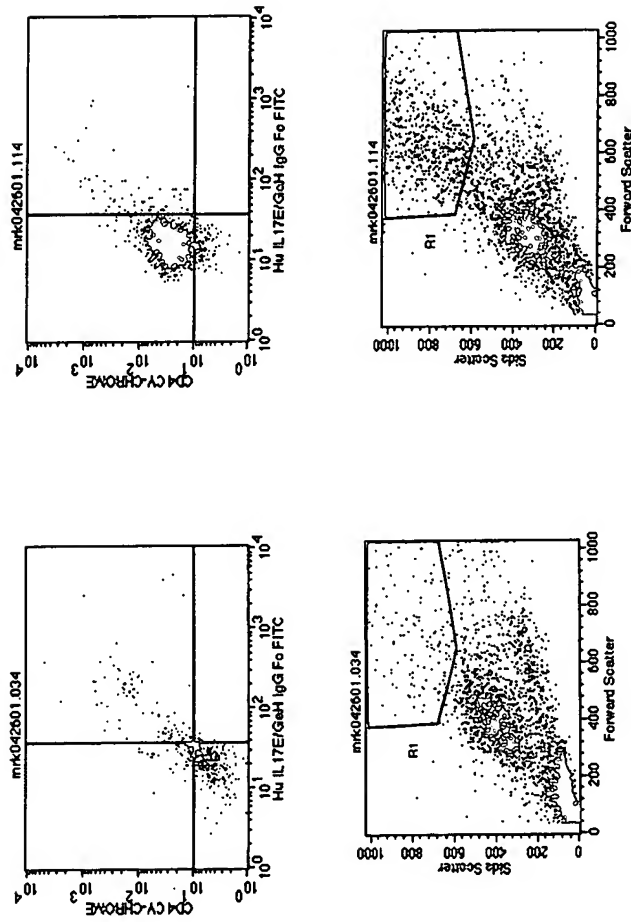
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Figure 21B
CD4 Expression on Eosinophils in Bone Marrow



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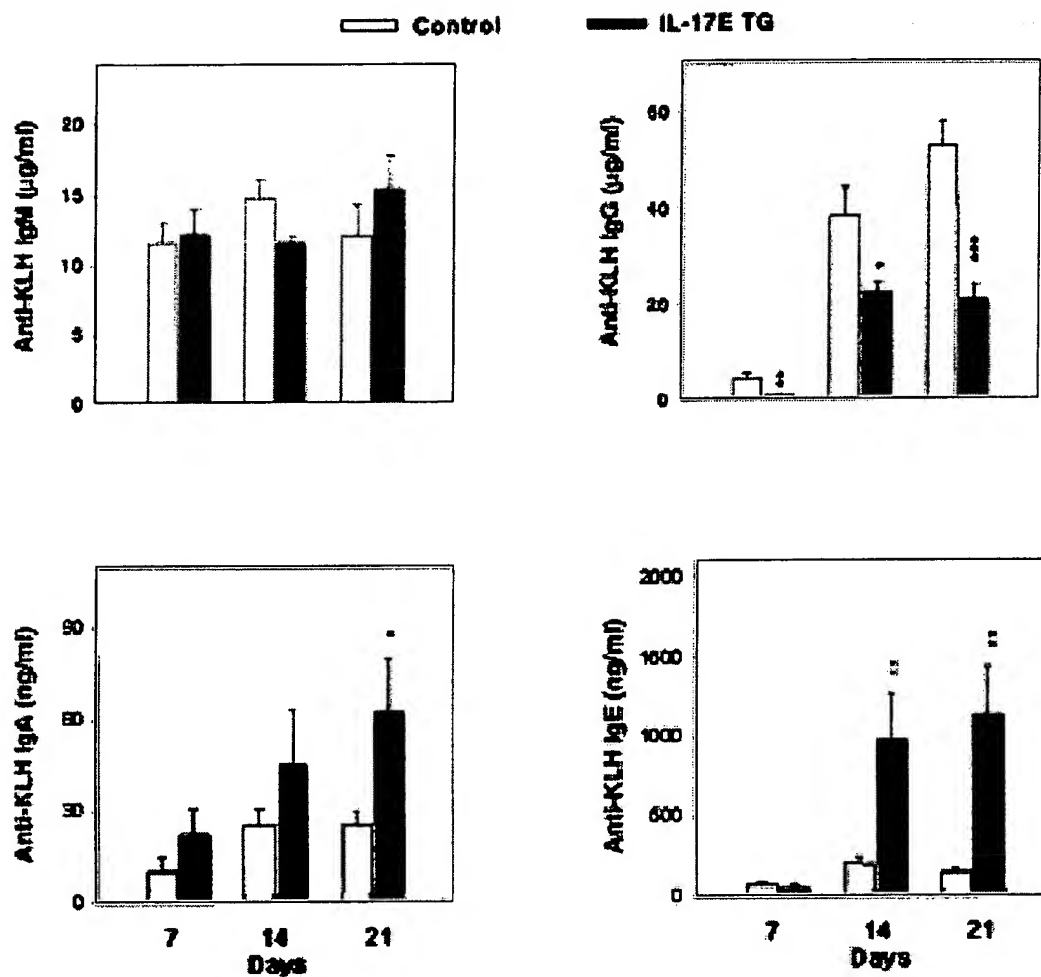


FIG.22

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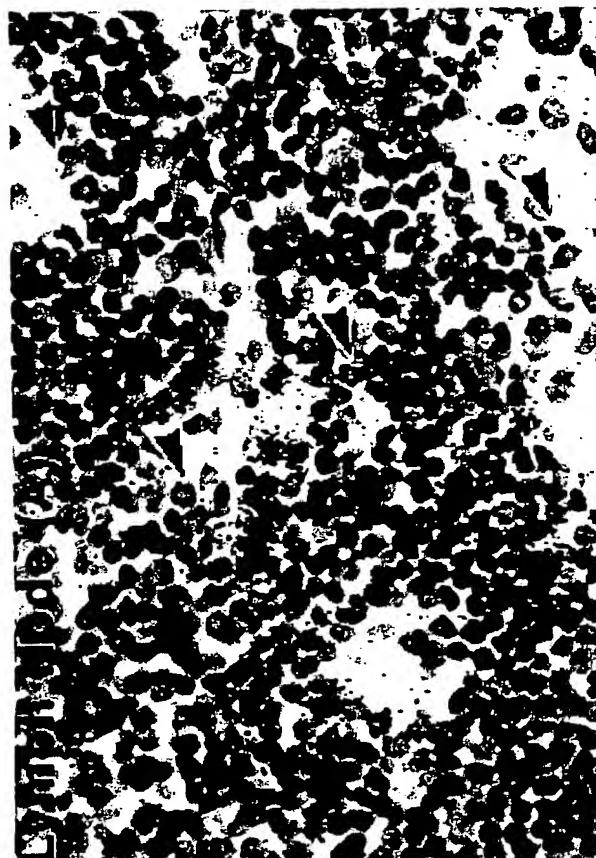


FIG.23